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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/732,724	12/10/2003	Joel A. Kubby	D/A3149	2677

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EXAMINER

BOECKMANN, JASON J

ART UNIT	PAPER NUMBER
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3752

DATE MAILED: 04/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/732,724

Applicant(s)

KUBBY ET AL.

Examiner

Jason J. Boeckmann

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/10/2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) 11-20 and 31-49 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 21-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-49 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/10/2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-10, 21-30 and 40-49, drawn to a micromechanical dispensing device, classified in class 239, subclass 102.1.
- II. Claims 11-20 and 31-39, drawn to a dispensing system, classified in class 700, subclass 283.

The inventions are distinct, each from the other because of the following reasons:

Inventions II and I are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because any dispensing device can be controlled by the system controller. The subcombination has separate utility such as it can be used without the system controller of the combination.

Because these inventions are independent or distinct for the reasons given above and have acquired a separate status in the art in view of their different classification, restriction for examination purposes as indicated is proper.

This application contains claims directed to the following patentably distinct species:

- I. Species I, directed towards figures 2, 3, 4 and 5,

II. Species III, directed towards figures 6 and 7.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, no claims are generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

During a telephone conversation with Wayne Egan on February 13th a provisional election was made without traverse to prosecute invention I and species I, claims 1-10 and 21-30. Affirmation of this election must be made by applicant in replying to this Office action. Claims 11-20, 31-39 and are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the following must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

- a. The electrostatically-driven membrane of claims 3 and 23,
- b. The electrostatically-actuated piston of claims 3 and 23,
- c. The magnetically-actuated membrane of claims 3 and 23,
- d. The thermally-actuated paddle vane of claims 3 and 23,
- e. The ballistic aerosol dispensing mechanism, of claims 3 and 23,
- f. The dispersion pad of claims 9 and 29, where the dispersion pad is arranged to receive at least one fluid that is dispensed,
- g. The orifice plate of claims 10 and 30, where the orifice plate is arranged such that at least one of the one or more fluids dispensed by at least one or more of

the micromechanical dispensing mechanisms is further dispensed through the orifice.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 10, 20-23 and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Gooray et al (6,419,335).

Gooray et al shows a micro mechanical dispensing device comprising a plurality of micromechanical dispensing mechanisms (figure 7), each micromechanical dispensing mechanism fluidly connected to a corresponding fluid reservoir (column 5, lines 7-8). The micromechanical dispensing device further comprising a controller (180), the controller arraigned to communicate with each micromechanical dispensing mechanism (figure 3). Regarding claims 2 and 22, the micromechanical dispensing mechanism includes a port (112). With respect to claims 3 and 23, the micromechanical dispensing mechanism is an electrostatically actuated piston (120). Regarding claims 10 and 30, the micromechanical dispensing device further includes an orifice plate comprising an orifice (140)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 4 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gooray et al (6,419,335) in view of Helf et al (6,293,474).

Gooray et al shows all aspects of the applicants invention as in claims 1 and 20 above, but does not specifically disclose that the one or more fluids contained in the at least one fluid reservoir comprises a perfume, pheromone, humectant, miticide, deodorizer, disinfectant, sanitizing agent or insecticide. However, Helf et al shows a micromechanical-dispensing device that is used to dispense perfume, disinfectant or insecticide (column2, lines 28-40). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention, under the teachings of Helf et al, to use perfume in the fluid reservoirs of the micromechanical dispensing device of Gooray et al in order to make the air smell more pleasant.

Claims 5-7 and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gooray et al (6,419,335) in view of Hess et al (6,802,460).

Gooray et al shows all aspects of the applicant's invention as in claims 1 and 20 above including a positioning sensor (160) connected to a control mechanism (180), and used to detect the position of the diaphragm during use. However, the sensor (160) is not arranged to form a signal responsive to an atmospheric substance that has been dispensed from the micromechanical dispensing device (120). Hess et al teaches, in column 3, lines 15 to 35, that scent sensors are well known in the art and have been "used in electrical control circuitry of scenting and air freshening devices in order to control the release of the scents and their intensity in the respective environments." Therefore, it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention, under the teachings of Hess et al, to add a scent sensor to the already existing sensor control mechanism of Gooray et al in order sense the atmospheric conditions as well as the scents that have been dispensed from the micromechanical dispensing mechanisms. The addition of a scent sensor would allow the micromechanical dispensing mechanisms to automatically determine the correct amount of scent to be dispensed and for what reservoir without user input.

Claims 8 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gooray et al (6,419,335) in view of Kubby et al (6,357,865).

Gooray et al shows all aspects of the applicant's invention as in claims 1 and 20 above, but does not specifically disclose one or more check valves interposed between corresponding micromechanical dispensing mechanism and their corresponding fluid reservoirs. However, Kubby et al shows a check valve (column 3, line 48) interposed

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between a corresponding micromechanical-dispensing device (10) and its reservoir (not shown, column 3, lines 45- 6). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to add the check valve of Kubby et al, to the micromechanical dispensing device of Gooray et al in order to prevent fluid from flowing back into the reservoir.

Claims 9 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gooray et al (6,419,335) in view of Denen (6,439,474).

Gooray et al shows all aspects of the applicants invention as in claims 1 and 20 above, but does not specifically disclose that micromechanical dispensing device includes a dispersion pad arraigned to receive at least one fluid dispensed into the atmosphere, the dispersion pad comprising porous ceramics, celluloseic fibers, flax, cotton, wood, protein-based fibers, wool, animal hides, nylon, polyester or olefinic fibers. However, Denen shows a micromechanical-dispensing device (10) that includes a dispersion pad (32) made out of cotton (column 6, line 8). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to add the dispersion pad of Denen to the micromechanical dispensing device of Gooray et al in order to allow the liquid to be dispensed at a steady rate.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Smith et al (6,247,525) shows a dispensing device that is

electrically actuated. Watkins (6,536,746) shows a dispensing device comprising a controller, a motion sensor and an electrically actuated dispenser.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason J. Boeckmann whose telephone number is (571) 272-2708. The examiner can normally be reached on 7:30 - 5:00 m-f, first Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Scherbel can be reached on (571) 272-4919. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JJB

JJB

3/29/06



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